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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,633	05/01/2006	Christophe Colignon	LAV0313163	3824

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EXAMINER

EDWARDS, LOREN C

ART UNIT	PAPER NUMBER
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3748

MAIL DATE	DELIVERY MODE
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06/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,633	Applicant(s) COLIGNON, CHRISTOPHE	
	Examiner LOREN C. EDWARDS	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An Applicant's Amendment filed on 5/7/08 has been entered. Claims 7-20 have been added. Overall, claims 1-20 are pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 7, 11-13, and 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mikami et al. (U.S. 6,655,133). Mikami discloses a system for assisting in the regeneration of depollution means (Col. 1, Lines 50-56) associated with oxidation catalyst-forming means (Fig. 18, No. 73), and integrated in an exhaust line of a motor vehicle diesel engine (Fig. 1, No. 1) and in which the engine is associated with common manifold means (Fig. 1, No. 11) for feeding the cylinders of the engine with fuel, and adapted at constant torque to implement a regeneration strategy by injecting fuel into the cylinders in at least one post-injection operation (Col. 24, Lines 28-42), the system comprising: detector means for detecting a regeneration request (Fig. 31) and thus a request for post-injection; detector means for detecting a state of the foot being raised on the vehicle accelerator (Fig. 31, Step 501; Col. 24, Lines 19-22); temperature acquisition means for acquiring the temperature downstream from the catalyst-forming means (Fig. 18, No. 76); means for determining a maximum quantity of fuel to be injected in the post-injection operation during the period of returning to idling following

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the foot being raised on the accelerator (Fig. 31, Steps 503 and 504), and on the basis of the temperature; and means for immediately interrupting the or each post-injection operation as soon as the quantity of fuel injected has reached the predetermined maximum quantity (Fig. 31, Step 505).

4. With regards to claim 2, Mikami discloses the system of claim 1, as described above, and further wherein the depollution means comprise a particle filter (Fig. 18, No. 70).

5. With regards to claim 3, Mikami discloses the system of claim 1, as described above, and further wherein the depollution means comprise a NOx trap (Col. 2, Lines 40 and 41).

6. With regards to claim 7, Mikami discloses the system of claim 2, as described above, and further wherein the depollution means comprise a NOx trap (Col. 2, Lines 40-41).

7. With regards to claims 1-13 and 17, Mikami discloses the system of claims 1-3, and 7, as described above. This system has all of the essential elements of the instant claims and the method to so perform is inherently included.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 4, 8-10, 14, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mikami in view of Vincent et al. (U.S. 6,488,725). Mikami discloses the system of claims 1-3, and 7, and the method of claims 11-13, and 17 as described above, but fails to specifically describe wherein the fuel includes an additive for being deposited, together with the particulate with which it is mixed, on the depollution means in order to facilitate regeneration thereof. Vincent discloses a fuel additive for an internal combustion engine application that assists in the regeneration of a particulate trap (Vincent; Col. 3, Lines 15-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the fuel additive of Vincent in the system of Mikami for the advantage of eliminating the need for low sulfur fuel (Col. 2, Lines 43-61).

11. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mikami in view of Peter-Hoblyn et al. (U.S. 6,023,928). Mikami discloses the system of claim 1 and the method of claim 11, as described above, but fails to specifically describe wherein the fuel includes an additive forming a NO_x trap. Peter-Hoblyn discloses reducing emissions from an internal combustion engine by applying a catalyst

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fuel additive, which then deposits on an exhaust aftertreatment device (Peter-Hoblyn; Col. 2, Line 64 – Col. 3, Line 18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the catalyst fuel additive of Peter-Hoblyn in the system of Mikami for the advantage of renewing the activity of a catalyst (Peter-Hoblyn; Col. 1, Lines 47-49).

12. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mikami in view of Pouit (U.S. 3,157,987). Mikami discloses the system of claim 1 and the method of claim 11, as described above, but fails to specifically describe wherein the diesel engine is associated with a turbo charger. Pouit discloses a turbo charged engine (Pouit; Col. 1, Lines 10-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the turbo of Pouit in the system of Mikami for the advantage of increased power and engine efficiency (Pouit; Col. 1, Lines 50-56).

Response to Arguments

13. Applicant's arguments filed 5/7/08 have been fully considered but they are not persuasive. Applicant has argued that "Mikami sets no limit as to the post-injected amount of gas, and especially not by determining a maximum quantity of fuel to be injected in the post-injection operations during the period of returning to idling following the foot being raised on the accelerator, and on the basis of said temperature, and immediately interrupting the or each post-injection operation as soon as the quantity of fuel injected has reached the predetermined maximum quantity". The examiner respectfully disagrees. Mikami discloses performing post injection operations to raise

the catalyst temperature, and to repeat these post injections until a predetermined temperature has been reached (Fig. 31 - Step 503; Fig. 29). This process occurs during the period of returning to idling following the foot being raised on the accelerator (Fig. 31 – Step 501), and is based on the temperature downstream from the catalyst forming means (Fig. 29 – Steps 301 and 304). The amount of fuel injected during this process can be considered the maximum quantity of fuel for that cycle.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LOREN C. EDWARDS whose telephone number is (571)272-2756. The examiner can normally be reached on M-TH 5:30-4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas E. Denion/
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